Division of Building Safety

ELECTRICAL NEWS BRIEF

Volume 1, Issue 12

November 18, 2005

Important Notice
Swimming Pool Bonding

The State of Idaho Electrical Bureau, Boise City Electrical Department, Meridian Electrical Department held a meeting to establish a consistent standard of inspection for Swimming pools and would like to inform the electrical industry and Pool/Spa installers on what the Equipotential Bonding Grid is and how to be install. If you have any questions please contact one of the following: State of Idaho - Jeff Fitzloff – 208-332-8980 or jfitzloff@dbs.idaho.gov, Boise City - Jim Schmer – 794.9423 or jschmer@cityofboise.org, Meridian City - Harold Welsh - 941.1500 .

(C) Equipotential Bonding Grid. The parts specified in 680.26(B) shall be connected to an Equipotential bonding grid with a solid copper conductor, insulated, covered, or bare, not smaller than 8 AWG or rigid metal conduit of brass or other identified corrosion-resistant metal conduit. **Connection shall be made by exothermic welding or by listed pressure connectors or clamps that are labeled as being suitable for the purpose and are of stainless steel, brass, copper, or copper alloy.** The Equipotential bonding grid shall conform to the contours of the pool and shall extend within or under paved walking surfaces for 1 m (3 ft) horizontally beyond the inside walls of the pool and shall be permitted to be any of the following:

(1) Structural Reinforcing Steel. The structural reinforcing steel of a concrete pool or deck where the reinforcing rods are bonded together by the usual steel tie wires or the equivalent. Where deck reinforcing steel is not an integral part of the pool, the **deck reinforcing steel shall be bonded to other parts of the bonding grid using a minimum #8 AWG solid copper conductor with an approved and listed connector for use with steel and copper in concrete.**

Equipotential bonding grid:

1. **Re-Bar.** Re-bar can be tie wired and **SHALL** be held a minimum of 1 ½" off of the ground and **SHALL** have a minimum of 12" squares.
2. **Steel Mesh.** Steel mesh **SHALL** be a #6 steel minimum with 6" squares and shall be held off of the ground 1 ½". (If mesh is not continuous it **SHALL** be bonded together by bonding to wire mesh by pressure connectors or clamps of brass, copper, copper alloy, or an equally substantial approved means and **SHALL** be overlapped at least one square. If tie wires are used, they **SHALL** be tied every 12: (minimum) at the crosses.)
3. **Copper Wire.** Copper wire shall be #8 minimum with 12" squares and **SHALL** be installed by an Electrical Contractor.

The Copper wire shall be bonded by exothermic welding or by listed pressure connectors.

Clamps and Terminations. Clamps and Terminations must be **<u>listed and approved</u>** for the use in concrete and type of material it's connecting to (ie: rebar to copper).

We have attached some examples of what listed terminations may look like.